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PROBLEMS OF THE ESTIMATION AND RATIONAL UTILIZATION OF HUMAN RESOURCES IN THE PROCESS OF ECONOMIC DEVELOPMENT

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PROBLEMS

OF THE ESTIMATION AND RATIONAL UTILIZATION OF HUMAN RESOURCES IN THE PROCESS OF ECONOMIC DEVELOPMENT

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The importance and conditions for the rational use of human resources

1. It is a well-known fact that the rational and full utilization of the man-power resources has a particular importance, being one of the main factors of the economic power of any country, and of the living standard of its population; notice is also taken of the fact that labour is an everlasting and natural condition of human life, the source of creation of all material and cultural values, and at the same time the fundamental condition of the development of human society, that in the process of work, the people turn to account the natural wealth, produce all the goods necessary for their living, create and improve the working tools, broaden their technical and scientific knowledge, enrich their experience in production, thus ensuring the increase of production,labour productivity and social wealth.

2. Considering the numerous problems arising in connection with the rational utilization of the man-power resources, it seems to us ureful to recall some of the main aspects in this field.

3. The greater the number of productive workers, and the higher the productivity of their work with the aid of the means of production in operation, the greater the social produce, the social wealth , the level of satisfying the material and cultural requirements of the people, the shorter the duration of work, the easier the working conditions and more perfect the free human living conditions at a corresponding organization of social-economic life.

4. We can express the higher level of productive activity of the population of a country by " the productivity of the working day of society," which is determined by the number of those producing material goods (means of production and consumer goods) and by their labour productivity. Taking into account the number of days worked on an average during a year by a producer, we will see the productivity of the working year of society, which will also express to what extent the days of a year are productively utilized. Referring to the productivity of the working day or year of society to the population of a country, we see the index of efficiency using the human resources in a certain country.

5. From those stated above we can note that at an unchanged labour productivity, the social produce, the national wealth (and therefore also the possibility of raising the people's living standard) will be the bigger, the greater the number of producers of material goods. This naturally depends on several factors among which an important place is occupied by

the volume of production, its structure and especially its growth, the rate at which it develops.

6. The volume and structure of production are influenced by the specific character of the natural wealth, by the degree of processing the natural wealth, by the extent to which a smaller or bigger quantity of live work is added to the unprocessed natural wealth. If work is added only for extract from the subsoil (for instance ores, oil) or to obtain from the surface of the soil (for instance wood) or from animals (for instance leather, wool) certain raw materials, the value produced is small, the degree of using the labour force resources reduced and the rate of increasing national wealth and the people's living standard very low. In foreign trade, the exchange of such products with others of a high degree of industrial processing is disadvantageous ,because the native labour force is not rendered profitable, considerable quantities of such products are necessary for paying some imported products in more reduced quantities,but in which the labour force of the respective countries is rendered profitable to a great extent. The increase in the degree of processing natural wealth permits the creation of products of higher values from the same quantity of raw materials; in this way the labour force resources are rendered profitable to a higher level, accelerating the rate of development of the national economy and of improving the people's living stabdard.

7. A distinction is made between the number of the able-bodied population , who can be drawm in social production and influences the economic potentiality of the country, the number of those effectively employed in work (which does not coincide with the number of the able-bodied population)and the number of those who are employed in the sphere of material production and who influence the actual economic power of the country.

8. The conditions of development of a country are the more favourable the more important is the part in the able-bodied population participating in materialized labour. Conversely the bigger the number of those who do not participate at all in materialized labour as well as those who participate with a reduced number of days per year, the weaker the utilization of the man power resources of the society, the bigger the part lost by the potential production and the smaller the rate of development of the country.

9. The bigger the part of the labour force used by society in the sphere of material production, the bigger the degree of the use of man power resources of a country. One could take as an indicator of the degree of using the labour forces employed, the relation between the number of those employed in material production and the total number of those employed in materialized labour (the rest being occupied in the sphere of health, education, culture, various jobs, administration and other unproductive fields). However the most general indicator of the degree of using the man-power resources is the relation between the number of participants in material production, and the total number of the population.

10. The economic efficiency of the utilization of labour forces is not the same in all the branches of the national economy. It is known, for instance, that in industry, with the same outlay of livework one can obtain a production of a bigger value than in agriculture. Sensible differences can also be remarked between the various industrial branches; for example, labour productivity in the machine building or the petrochemical industry is obviously higher than in the ore extraction industry of the

industry of construction materials. These differences in the level of labour productivity between various economic or industrial branches are determined by the degree of the processing of the products, by the extent to which the natural resources underwent more simple or more complex processing, by the quantity of work incorporated in the products up to their final stage, by the level of qualification of this work, by the volume, technical level and complexity of the means of work of human labour.

11. From what we have shown above, it comes out that the economic power of a country depends to a great extent on the proportions in which the productive workers are judiciously employed in various economic branches, industrial branches respectively. These proportions cannot be selected, in a given period, in a subjective way, but are objectively determined by the structure of the national economy, by the structure of production in that period of time. However, these proportions can be changed within a shorter or a longer period of time through an adequate economic policy of developing the branches, and respectively, the sub-branches with a higher labour productivity. This process is visibly taking place in the countries which have stepped on the road of socialist industrialization, using to an ever greater extent their natural resources, their specific conditions, for solving this problem of particular significance.

12. We must stress that the development of industry creates conditions for an increase in labour productivity also in agriculture (just as in other branches) making available means of mechanization and electric power, which enable the carrying out of the whole volume of operations with less live work. At the same time, agricultural production also increases as a result of the better quality of the operations made with the aid of mechanized means and the use of chemical means (fertilizers, herbicides, etc.) put at disposal by industry, of irrigation work, etc. The labour forces which have thus become available can be utilized for the development of the industry, of constructions, as well as for other branches of productive activity. The growth of the number of personnel in industry, on the basis of the decrease of those in agriculture is therefore a progressive process, along the line of the superior utilization of man-power resources

13. Under certain circumstances of interest is the completion of the work in agriculture with work within the activity of industrial processing of the raw material and of the agricultural produc s. Considering the fact that the labour forces in agriculture are not used to the same extent all through the year, there appear periods of reduced use, failure to use part of the labour forces. The use of these forces for the processing up to a certain stage of the raw material and agricultural produce raises the efficiency of the utilization of the man-power resources. At the same time, savings are achieved in the field of transport, and there are smaller losses linked with the delay of the processing and transport. This problem is solved in accordance with the concrete conditions of each country, such as, for instance, the existence or non-existence of certain industrial enterprises for superior processing, modernly equipped and with available capacities, the extent to which the ensurance of the necessary labour forces, or, conversely, the use of the available labour forces arcuse more serious problems in industry and agriculture, the possibilities and the policy of investments, etc.

14. Important is also the way in which the labour forces are distributed within a branch or a sub-branch, in the direction of guiding them mainly towards those enterprises in which the same products are turned out with less social expenditure, and with a higher labour productivity.

15. For a given total number of employees, the bigger the specific weight of the employees who most directly condition the volume of production and its value, the higher will be the degree of utilization of labour forces; here we take into account the productive workers and the experts creating these material values together with these workers, men of science, engineers, technicians, designers, laboratory assistants, etc. The book-keeping financial and administrative personnel, although necessary for the creation of conditions and for keeping the economic-financial effects of the productive activity, cannot make the same contribution to material production as the above mentioned personnel, and consequently, the progress in organizing the work of the technical-administrative personnel must lead to the decrease of the specific weight of the administrative book-keeping and financial personnel and to the increase of the participation of technical cadres.

16. We have mentioned the fact that the economic efficiency of the utilization of the man-power resources of a country is determined not only by the number of participants in material production, but also by the productivity of their work; the higher the labour productivity of the same number of productive workers, the bigger their economic results. The increase in labour productivity is considered as the most important factor of the development of society, of raising it to higher stages. In the countries with a high rate of production increase ,as for instance the socialist countries, the bigger part (as a rule 2/3 and more) of the growth of production is ensured by raising labour productivity, and the other, smaller part, by raising the number of producers; in these countries the rate of production increase surpasses by far the rate of increase of man-power resources.

17. In its turn, labour productivity depends ,of course,on a whole series of factors of which we mention especially: the degree of endowment with machines, equipment, mechanisms (fixed funds) ,their technical level, the degree of utilization of such means, the progress obtained in perfecting the raw materials and materials , the level of qualification of the workers and technicians, the way of organizing production and labour, the working methods used, the material incentive of the participants in production , in obtaining best results in work, their attitude towards work, their elan and initiative in work. Of course, in certain branches ,one cannot neglect the influence of the natural conditions either.

18. The social organization of production, the character of the relations of production exert a most important influence on the national utilization of the man-power resources, both as regards the possibility of drawing in work , and especially in productive work, an as big as possible part of the able-bodied forces, and as regards the ensurance of the conditions for more rapidly increasing labour productivity.

19. The organization of production, as well as of the whole economic life by society in general, as possessor of all the means of production,has incontestable advantages compared with the organization which corresponds to the activity of a whole number of isolated producers, each of them acting for his own interest and very often against the interests of others. The state as organizer of production and collective owner of the means of production, has at its disposal all the means and key-factors of the economy, so that it is capable to mobilizedwith maximum of economic efficiency, on the basis of a unitary plan, all the natural resources, material and financial means, as well as its man-power resources; there can no longer appear economic crises, the non-use of part of the production capacity, total or partial unemployment,etc. Under such conditions, the state can impose a high rate

of development of the national economy, utilizing as fully as possible all production capacities and man-power resources, can take all the necessary measures for constantly raising labour productivity, can ensure the best conditions for the material and moral incentive of its members, at the same time being able to rely on their working elan, inspired by the conscience that they work for themselves, for their society.

Methods of determining the man-power resources and of their planned utilization in the process of economic increase

20. The planning of work on the ensemble of the national economy ensures the planned distribution of the man-power resources among the economic branches and the territorial units of the country and creates the pre-requisites for an as economical and productive use of them as possible, in each enterprise or economic unit.

21. A main instrument for the planning of the utilization of the man-power resources is the balance of man-power resources. The balance of man-power resources enables the determination of the country's man-power resources, and the analysis of their degree of utilization in various branches of the economy. With the aid of the balance of the man-power resources, and taking into consideration the necessities of the development of the national economy, one can determine the possibilities of ensuring all branches the necessary man power , bring to the fore the existing reserves of man-power in view of attracting them in production (house-wives, for instance), re-distribute the man-power among various branches and regions for its more rational use, determine the proportions of the man power resources and of the population in urban and rural areas, respectively.

22. The main components of the bal ance of the man-power resources are the following :

a. The man-power resources, that is the number of able-bodied citizens, their structure according to age, their territorial repartition, etc. This part of the bal ance includes the data regarding the population at the age apt for work (16 to 59 years for men and 16 to 54 years for women) from which one has to subtract the population at the age apt for work but disabled (for instance invalids, etc.) .To this result is added the population above the age apt for work, which is employed. Thus, one can obtain the total number of citizens engaged in the national economy ;

b. The utilization of man power resources. Here we present the data regarding the population employed in :

i) the sphere of material production (industry, constructions, agriculture, forestry ,goods transport, telecommunication for the sphere of material production and other branches which directly contribute to the creation of material production),

ii) the unproductive sphere (unproductive transport, unproductive telecommunications, civic and housing administration, and other unproductive services , education ,culture, arts, science and health protection, social assistance and physical culture, financial and insurance institutions, administration, political and social organizations),

iii) both in the sphere of material production and in the unproductive sphere the data are given separately for the state sector and

separately for the cooperative sector.

c) The other resources - comprising pupils and students from 16 years of age on, and other categories of the population at the age of work, housewives, military men, etc.

d. Data regarding the man power resources and their utilization are obtained on the basis of general or partial censuses of the population, on the basis of demographic calculations, statistical estimations, inquiries, and statistical monograph , family budgets drawn up for various categories of families of employees or peasants.

23. In keeping with the aim pursued, the balance of the man power resources is worked out both for shorter periods of time (statistical balance) and for future periods of the plan (plan balance); over the whole national economy and by territorial units (regions, districts, towns, etc.); by urban and rural areas ; by sexes.

24. Apart from the balance of man-power resources, important is also the working out of the balance of qualified labour force and of experts, on the basis of which one can establish the necessary number of pupils to be trained for various trades, technical and economic specialities, in keeping with the future necessities of the national economy.

25. The ensurance of the corresponding level of general culture and professional training, specialization and systematic increase of the workers' qualification in keeping with the tasks set by the technical progress, is achieved in all kinds of schools, courses for qualification and for raising the training of cadres of all levels, on the basis of the state plan of training cadres.

26. The following methodological principles are taken into account when drawing up the balance of the man-power resources:

a. For determining the number of people necessary for each branch, one must take into consideration: the volume of activity planned for the respective period (the volume of industrial output, the volume of building and assemblage works, the volume of transport, the volume of the tasks in elementary, secondary and higher education, etc.) and the volume of the productivity of planned work (or the norms of practised servicing).

b. The distribution of the population employed on social-economic sectors is made in accordance with the form of property over the means of production in each sector (the state and the cooperative sector).

c. The establishment of the figures in the urban and rural areas is achieved by considering the domicile of the persons.

The way of using the man-power resources in two different periods of the evolution of Rumanian economy
(Before and after World War II)

27. The unsatisfactory use of active labour force in the period 1926-1938 (which in 1930 was estimated as representing about 58 per cent of the total number of the population [a]) was influenced by the low level of the

a) Statistical Yearbook of Rumania vol. II, 1939, page 38 and 169

industrial and agricultural production in that period of time. The essential factors which brought about this situation were numerous and complex.

28. Although Rumania possessed a varied basis of resources of useful raw materials, the industry was poorly developed, reduced volume and inadequate structure. Of the whole number of active citizens registered in 1937, only 7.2 per cent were employed in industry [b] ; over 63 per cent of the total number of wage earners engaged in the processing industry in 1938 were employed in the following branches: food , textiles, leather, timber, building materials [c] and less than 6 per cent in the machine building branch. [d]

29, Therefore, apart from the relatively reduced volume of production, industry had a structure, which - mirroring the preponderence of the branches of the consumer goods production and the lack of heavy industry and first of all of the machine building branch which deserved due attention - could enable only to a very small extent its own development, and to an even smaller extent, the development of the other branches. The weak industrial development led to the fact that certain important industrial products (oil, timber, metals) were incompletely processed and turned to account, important quantities of them being exported as raw materials (especially oil and timber [e]). Because of this, the value of the products turned out in a working time unit in the industry of our country in that period of time was very low in comparison with the industry of other countries. A characteristic feature of Rumania's industry in that period of time was the poor endowment of labour with machines and equipment, with motive power. [f]

30. Deprived of the support of a developed industry, agriculture which comprised 78.2 per cent of the country's active population [g] , was also poorly equipped with agricultural machines and implements, because of which the agro-technical level of the agricultural operations was also low. The technical endowment of work in agriculture is proved by the fact that in the period 1935-1938 there was one tractor for 4,298 hectares of arable land [h] , a sowing machine for 333 ha [h] , a plough for 3 farms [h] and a harrow for four farms. [i] The main produces of the agricultural vegetal production were cereals, especial wheat and maize [j] . The production of technical plants such as sun flower, sugar beat , flax, hemp, etc. valuable from the economic point of view, was very small in relation to the requirements of the population.

31. In comparison with the agricultural and arable area of the country, the number of live stock was also small, and their productivity was also low. An important part of the agricultural produce was exported in an unprocessed condition. Considerable quantities of cereals (between 1 to 3.5 million tons) [k] were exported as such instead of being used in the branch of cattle breeding for increasing the production of meat; milk, wool, eggs, etc., and more fully using the labour force in agriculture.

32. Taking into account the unsatisfactory proportions between industry and agriculture, and the fact that the contribution to the total social produce of a person engaged in agriculture was on an average several times smaller than in industry (and even that at a low level), social productivity of labour

b) Statistical Yearbook of Rumania, vol. II, 1939 page 168.
c) Statistical Yearbook of Rumania 1939-1940, pag. 478, 479.
d) Idem page 484-485
e) Idem page 628-629
f) Idem page 478-479

was generally very low and lent a backward character to the whole economy.

33. An important part of the national income, already quite small, was exported abroad (industry belonged to a great extent to foreign capital) or was appropriated by a reduced number of native owners of capital for unproductive consumption and hoarding. What remained from the national income for investments and for being distributed to the working people in towns and villages was extremely low.

34. The totality of these causes determined the maintenance of a reduced consumption and of a narrow home market (the main strata of the population were deprived of sufficient incomes for consuming the eventual production increases) which led to the fact that industrial output witnessed numerous periods of crisis or slack, and important number of workers in towns became unemployed, and the relative over-population then existing in the villages increased and went to towns, contributing side by side with the other factors to the growth of unemployment, the reduction of real wages, the general decrease in the living standard of the working people.

35. After World War II, following the political and social transformations which took place in our country, the state could pass on to the organization of production on the scale of the whole society.This has become possible thanks to the carrying out of the land reform in 1945, and the taking over by the state of the main means of production in 1948. Beginning with 1949, the development of the national economy has taken place on the basis of the unique state plan, which provides for the mobilization of the natural resources, of the material and financial means as well as of the man-power resources of the country, in such a way as to make possible their utilization with a considerably increased economic efficiency.

36. For endowing the labour force with ever more means of production and with an ever higher technical standard, the proportions of the industrial branches have been improved year by year, granting priority to the development of the heavy industry and as part of it, giving prominence to the machine building industry.

37. In only 11 years (1951-1961) owing to the endowing of all the branches of the national economy with a considerable volume of means of production, which is reflected in the 2,8 times increase of productive fixed funds, an extra number of 1,364,000 people could be employed, that is 64 per cent bigger than in 1950, while the total population increased by only 13 per cent in the same period of time, Thus, the degree of employment of the population has sensibly increased. In industry the number of workers increased at an even more rapid rate than all over the economy, being 81 per cent bigger than in 1950. The weight of the labour force in industry, compared with the whole labour force employed, increased about 2.7 times as against 1930.

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g) Statistical Yearbook of Rumania, vol. II, 1939, pag. 166.
h) Idem, page 260.
i) Monography of the Institute of Social Sciences of 1938: 60 Rumanian villages, vol. II, Bucharest, 1941.
j) Statistical Year Book of Rumania, 1939-1940, page 403.
k) Idem, page. 628-629.

38. As a result of the equipping of the national economy with ever more new means of production and of a high technical standard, of the organization of production, of the growth of the level of qualification of the workers and specialists, of the working elan of the masses, labour productivity has increased at a sustained rate. In industry, for instance, it was 2.3 times bigger in 1961 than in 1950.

39. As a consequence of the growth of the number of workers and the increase in labour productivity, the volume of the overall industrial output went up in 1961 by 5.8 times as against 1938. Even more important increases were obtained in the main branches of industry: electric and thermic power - 12 times, methane gas extraction - 29 times, machine building and metal processing - 13 times, chemistry - 14 times, building materials - 13 times, etc. We have passed on to the more complete and superior turning to account of the raw materials, a fact which contributed to the constant growth of the employed labour forces and the increase in this way too of the social productivity of labour. The territorial distribution of industry has improved, a fact which led to the ever more judicious use of the labour force in all the country's regions.

40. The important results obtained in the development of the heavy industry and especially in the increase in the output of the machine building industry, has permitted that the other branches of the national economy, too, be endowed with a big volume of means of production with a high technical standard. An eloquent example in this respect is offered by agriculture. On December 31st ,1961, the labour force employed in agriculture possessed 77,259 conventional 15HP tractors, that is 15.9 times more than in 1938; and this apart from the numerous other modern machines and implements such as: tractor ploughs, mechanical sowing machines, combines, etc.

41. Apart from the considerable growth of the means of production, a radical change took place in agriculture also as regards the organization of work. It is known that the simplest cooperation in work results in a better organization of work, in the increase of labour productivity. Starting from the economic advantages of cooperation in work, beginning with 1949, the working peasantry stepped on the road of setting up big collective farms; in the spring of 1962 , the process of collectivization was completed all over the country, a great historical event in the life of our people. The joint organization of work soon gave fruit. Although the weight of the active population in agriculture decreased from 78.2 per cent in 1930 to about 66 per cent at the end of 1961, because a part passed on to other branches, nevertheless the annual average agricultural output of the years 1956-1960 considerably surpassed the annual average production of the years 1934-1938. The more expanded cultivation than in the past of technical plants has led to the better use of the labour forces in agriculture.

42. Parallel with the development of industry and agriculture, as a result of the growth of the material and financial means, the labour force employed also in the other branches of material production and in the unproductive sphere could steadily be increased.

43. The more rational utilization of the man-power resources and the increase in labour productivity has enabled the considerable growth of the national income (by three times compared with 1938). Consequantly the home market was steadily expanded, as a result of the increase in the income of the population and of their material and cultural standards. An illustration of the raising of the working people's welfare is the fact that real wages went up nearly twice between 1950 and 1961.

44. The estimations made in our country on the occasion of the drawing up of the plan of development of the national economy for 196 1965, and of the outline of the long term economic plan up to 1975, have shown the possibility of increasing by another one million the number of employees by 1965, (an increase which represents 33 per cent of the number of wage earners employed in the national economy in 1959) and by over 2,27o,ooo until 1975. The specific weight of industry will continue to grow; compared with 1959, industrial production will be 2.1 times bigger in 1965 and over 6 times bigger in 1975.

45.a)By 1965 the labour force occupied in agriculture will be equipped with nearly 1oo,ooo physical tractors (nearly 15o,ooo H.P.conventional tractors), that is 25 times more than in 1938. The continuous increase in the equipment of agriculture with tractors and agricultural machines will support the many-sided development of agriculture, the extension of the cultures which yield an output of a higher value and which require an increased volume of work, will permit the reclaiming of new lands with a difficult profile of work, will contribute to the growth of the output per hectare and of the agricultural output as a whole, will result in the facilitation of work and a considerable increase of its productivity in agriculture .

b) As a consequence of the growth of labour productivity, agriculture will be able to further release new labour forces necessary for the rapid development of the other branches of the national economy, putting at their disposal approximately half out of one million which represents the increase in the number of employees until 1965.

46. Parallel with the growth of the number of employees and the increase of their labour productivity, the living standard of the working people is being raised. The plan for the period 196o-1965 provides for the increase in the real wages of the workers, technicians, engineers and office-workers by about 4o to 45 per cent until 1965, compared with the level attained in the second half of 1959, and the real incomes of the peasantry will go up by about 4o per cent compared with 1959.

47. As a result, the using by the whole society of the man-power resources enables the linking of this use to the constant and rapid rate development of the entire national economy, consequently ensuring the raising of general welfare.

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